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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,159	08/16/2001	Hitoshi Iwasaka	1609.1001	1497

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
RINEHART, KENNETH	

ART UNIT	PAPER NUMBER
3749	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/930,159	IWASAKA ET AL.
	Examiner	Art Unit
	Kenneth B Rinehart	3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-14,28-32 and 38-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *45-54* is/are allowed.

6)☒ Claim(s) *1,5,6,10-14,28,29,38-44,55 and 56* is/are rejected.

7)☒ Claim(s) *7-9 and 30-32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 August 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/3/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 4/12/2004 have been fully considered but they are not persuasive. The applicant argues that if the two spouts were arranged as shown in Exhibit A no swirl would result. Therefore the proposed modification requires proper arrangement of these orifices. The argument does not appear to be relevant as to the claim language or the rejection of the claims. The examiner believes that it involves only routine skill in the art to duplicate the spouts to provide for a multiplied effect. An individual of ordinary skill would be aware that if the flows from the spots were placed as in Exhibit A they would have a tendency to cancel or counteract one another as opposed to providing for a multiplied effect. The applicant appears to be stating in the declaration under Rule 132 that his invention is "unexpectedly superior" to Siniaguine. The examiner has no reason to dispute the results found in the document. However, the examiner disagrees that such a result would be unexpected.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a fluid supply mouth; and a fluid swivel formation object, comprising. a concave space formed in the body, including a perimeter, a peripheral wall to form a central hole therein and a swirl passage between the peripheral wall and the perimeter of the concave opening, a fluid introduction mouth to face the perimeter, and a fluid passage between the fluid introduction mouth and the fluid supply mouth, a plurality of the fluid passageways disposed at a circumference of the body, wherein the fluid swivel formation

object is disposed at a center of the body must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 55-56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 55 and 56 refer to a fluid supply mouth; and a fluid swivel formation object, comprising. a concave space formed in the body, including a perimeter, a peripheral wall to form a central hole therein and a swirl passage between the peripheral wall and the perimeter of the concave opening, a fluid introduction mouth to face the perimeter, and a fluid passage between the fluid introduction mouth and the fluid supply mouth, a plurality of the fluid passageways disposed at a circumference of the body, wherein the fluid swivel formation object is disposed at a center of the body was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 10, 14, 38, 39, 40, 41, 42, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al (6402843). Siniaguine et al discloses a body (1, fig. 1) having an end face that opposes an object to be conveyed, and at least one concave opening (4, fig. 1) formed in the end face and surrounded by a cylindrical inner wall, a fluid passageway having a ... of spouts to introduce fluid into an inner space of the concave opening in one circumferential direction of the cylindrical inner sidewall so as to cause a swirl of fluid within the concave opening, the ... of spouts being formed on the inner cylindrical inner sidewall (2,

fig. 1, fig. 2), a base (15, fig. 4), a plurality of fluid swirl formation objects which are provided at the base (16, fig. 1), wherein each of the plurality of fluid swirl formation objects comprises a body having an end face that opposes an object to be conveyed (fig. 1a, fig. 4), and a concave opening formed in the end face and surrounded by a cylindrical inner side wall (fig. 1), and a fluid passage way having a ... of spouts to introduce fluid into an inner space of the concave opening in a circumferential direction of the cylindrical inner side wall so as to cause a swirl of fluid within the concave opening, the ... of spouts being formed on the cylindrical inner side wall (2, fig. 1), at least one fluid discharge passage provided I the base to expel fluid supplied through the ... of spouts of the plurality of fluid swirl formation objects (fig. 6A), the concave opening is in a tapered shape (fig. 1a) . Siniaguine et al discloses applicant's invention substantially as claimed with the exception of plurality, the plurality of spouts are plural pairs of spouts, and each of the plural pairs of spouts is formed on the cylindrical inner side wall symmetrically to a central axis of the concave opening, the end face comprises a chamfered edge, the plurality of fluid swirl formation objects are provided at the base in such a way that each of the plurality of fluid swirl formation objects extend form the base. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have a plurality of spouts, the plurality of spouts are plural pairs of spouts, and each of the plural pairs of spouts is formed on the cylindrical inner side wall symmetrically to a central axis of the concave opening, the end face comprises a chamfered edge, the plurality of fluid swirl formation objects are provided at the base in such a way that each of the plurality of fluid swirl formation objects extend form the base because Applicant has not disclosed that the number of spouts or location of the spouts, or shape of the end face, or

shifting the location of a part provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the spout of Siniaguine or the claimed plurality of spouts, locations, and shapes and location of parts because both quantities, locations of spouts, and shape, and location of parts perform the same function of conveying equally well.

Claim 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al (6402843) as applied to claim 1 above, and further in view of Siniaguine et al (6099056). Siniaguine et al (6402843) discloses applicant's invention substantially as claimed with the exception of a centering guide to maintain a position of the object to be conveyed such that the object opposes the end face, the noncontacting conveyance equipment has an outer periphery, and the centering guide comprises at least three centering protrusions provided around the outer periphery. Siniaguine et al (6099056) teaches centering guide to maintain a position of the object to be conveyed (fig. 1b), the noncontacting conveyance equipment has an outer periphery (fig. 1b), and the centering guide comprises at least three centering protrusions provided around the outer periphery (13, fig. 8, col. 7, lines 8-11) such that the object opposes the end face for the purpose of preventing damage to the object being conveyed. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al (6402843) by including centering guide to maintain a position of the object to be conveyed such that the object opposes the end face, the noncontacting conveyance equipment has an outer periphery, and the centering guide comprises at least three centering protrusions provided around the outer periphery as taught by Siniaguine for the purpose of preventing damage to the object being conveyed so that operating and production costs are reduced.

Claims 11, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al (6402843) as applied to claim 10 above, and further in view of Siniaguine et al (6099056). Siniaguine et al (6402843) discloses applicant's invention substantially as claimed with the exception of fluid swirls clockwise in at least one of the plurality of fluid swirl formation objects, and fluid swirls counter clockwise in at least one of the plurality of fluid swirl formation objects, the base is surrounded with a peripheral edge to block a flow of fluid from the base, the peripheral edge has a stepped shape. Siniaguine et al (6099056) teaches fluid swirls clockwise in at least one of the plurality of fluid swirl formation objects, and fluid swirls counter clockwise in at least one of the plurality of fluid swirl formation objects (fig. 5) for the purpose of allowing the rotational vortexes on the article to cancel and the article does not rotate relative to the facing surface. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al by including fluid swirls clockwise in at least one of the plurality of fluid swirl formation objects, and fluid swirls counter clockwise in at least one of the plurality of fluid swirl formation objects as taught by Siniaguine et al for the purpose of preventing rotation to preserve the orientation of the object being transported for placement. Siniaguine et al (6099056) teaches the base is surrounded with a peripheral edge to block a flow of fluid from the base (13, fig. 1B) for the purpose of retaining the object adjacent to the facing surface. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al by including the base is surrounded with a peripheral edge to block a flow of fluid from the base as taught by Siniaguine et al (6099056) for the purpose of retaining the object adjacent to the facing surface so that the object is not damaged. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have stepped shape because Applicant has

not disclosed that the shape of the edge provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the shape of Siniaguine or the claimed shape because both shapes perform the same function of preventing damage to the object equally well.

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al as applied to claim 10 above, and further in view of Olsson et al. Siniaguine et al (6402843) discloses the non contacting conveyance equipment has an outer periphery (fig. 2). Siniaguine et al (6402843) discloses applicant's invention substantially as claimed with the exception of a centering guide to maintain a position of the object to be conveyed such that the object opposes the end face, the centering guide comprises at least three centering protrusions provided around the outer periphery. Olsson et al teaches a centering guide to maintain the object to be conveyed such that the object opposes the end face (33, fig. 3), the centering guide comprises at least three centering protrusions provided around the outer periphery (fig. 3) for the purpose of preventing damage to the object as it may move laterally across the surface. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al by including a centering guide to maintain the object to be conveyed such that the object opposes the end face, the centering guide comprises at least three centering protrusions provided around the outer periphery as taught by Siniaguine et al for the purpose of preventing damage to the object being conveyed and thus reducing transportation costs.

Allowable Subject Matter

Claims 45-54 are allowed.

Claims 7-9, 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 703-308-1722. The examiner can normally be reached on 7:30 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703-308-1935. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KBR

KENNETH RINEHART
PRIMARY EXAMINER